REMARKS

INTRODUCTION

In accordance with the foregoing, no claims have been amended. Claims 1, 2, 4-7, 9-17, 20-32, 34-44, 46-53 and 55-58 are pending and under consideration.

CLAIM REJECTIONS – 112

Claims 1-7, 9-17, 20-31, 34-44, 46-53 and 55-58 were rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement.

Specifically, the Examiner noted that the feature of the independent claims (using claim 1 as an example) where the signal checking unit senses whether an input signal cable is connected to the display device and checks whether the identified input signal is abnormal by decoding the identified input signal when the input signal cable is connected to the display device was not described in the specification.

It is respectfully submitted that paragraph [0015] of the specification of the present application discusses that: "In operation 233, the signal checking unit 115 checks whether H-sync and V-sync patterns of a digital visual interface (DVI) digital signal are abnormal **and** whether a DVI cable is connected to check whether the DVI digital signal is abnormal. In operation 235, the signal checking unit 115 checks whether H-sync and V-sync patterns of a VIDEO signal are abnormal **and** whether a VIDEO cable is connected to check whether the VIDEO signal is abnormal (Emphasis Added)."

As shown above, the specification of the present application satisfies the written description requirement for claim 1 and the other independent claims by discussing that the signal checking unit checks **both** of whether the identified input signal is abnormal **and** whether the input signal cable is connected.

As further evidence, it is respectfully noted that claim 8 in the present application as originally filed recites: "wherein the checking comprises determining whether the input signal is abnormal by **at least one** of decoding the input signal and sensing whether an input signal cable is connected to the display device (Emphasis Added)" which clearly indicates that both decoding the input signal **and** sensing whether an input signal cable is connected to the display device were supported in the present application as originally filed.

Withdrawal of the foregoing rejections is requested.

CLAIM REJECTIONS – 103

Claims 1-7, 9-17, 22-31, 36-44, 46-53 and 55-58 were rejected under 35 USC 103(a) as being unpatentable over Shaw et al. (US 5,276,436) (hereinafter "Shaw") in view of Sakuda et al. (US 5,886,545) (hereinafter "Sakuda") and further in view of Welmer (US 5,491,805) (hereinafter "Welmer").

Claims 20, 21, 34 and 35 were rejected under 35 USC 103(a) as being unpatentable over Shaw in view of Sakuda and further in view of Welmer and Yamashita et al. (US 5,808,693) (hereinafter "Yamashita").

Independent claim 1 recites, in part, that the signal checking unit senses whether an input signal cable is connected to the display device and checks whether the identified input signal is abnormal by decoding the identified input signal when the input signal cable is connected to the display device.

The Office Action relies on Shaw to show this feature of claim 1 and specifically relies on Figure 3 and 9:53-9:64 of Shaw.

Shaw discusses that if there is no signal being received, the program proceeds to instruction box 607 to cause the analog multiplex control signal MUX CONTROL to be switched allowing the HSYNC and VSYNC signal from another video signal source to be coupled to the microprocessor 36. After the MUX CONTROL signal has been enabled the program returns to decision 605 to once again determine whether an HSYNC is being received from the next selected or enabled source. The above described procedure repeats itself until an enabled video signal source begins sending video synchronization information (HSYNC, VSYNC). Shaw, 9:53-9:64 and Figure 6.

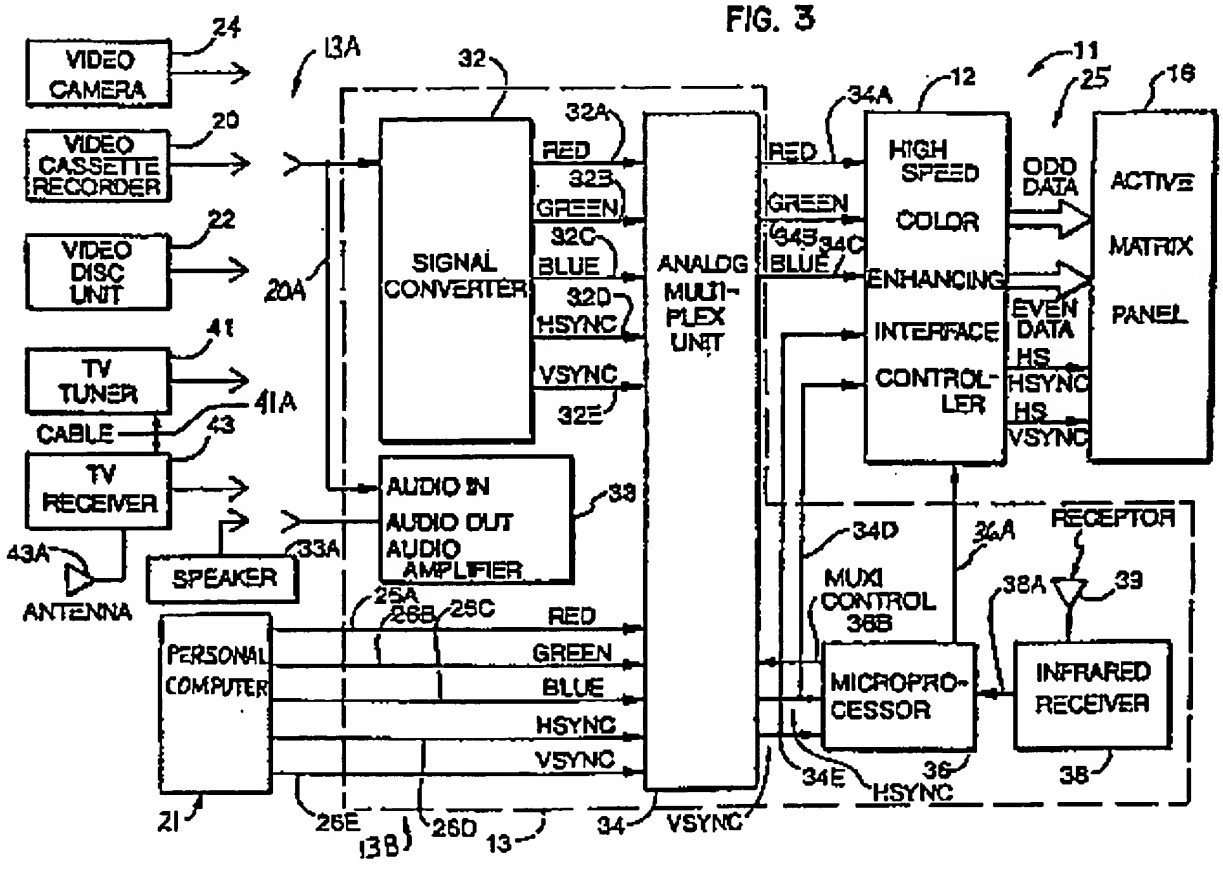
In contrast to Shaw, in claim 1 the signal checking unit only checks whether the identified input signal is abnormal by decoding the identified input signal when the input signal cable is connected to the display device.

The Examiner continues to argue that Shaw teaches that a signal checking unit checks whether an identified input signal is abnormal by decoding the identified input signal, relying on Figure 3 of Shaw to show that the signal converter 32 decodes the synchronizing signals from the inputted video signals.

Referring to Figure 3 of Shaw, which is reproduced below for the convenience of the Examiner, it is respectfully submitted that the signal converter 32 of Shaw only converts the NTSC television signal into the analog RGB signal. However, the signal converter 32 does not decode the NTSC television signal. Specifically, the signal converter 32 is a general converter, and not a decoder to decode a signal, and particularly not to determine the abnormality of the signal as recited in claim 1.

[Figure 3 of Shaw]

FIG. 3



In greater detail, at col. 9, lines 49-58, Shaw discusses that "the program proceeds to a decision instruction 605 in which a determination is made whether the microprocessor is **currently receiving an HSYNC signal** from the analog multiplex unit 34. If there is **no signal being received**, the program proceeds to instruction box 607 to cause the analog multiplex control signal MUX CONTROL to be switched **allowing the HSYNC and VSYNC signal from another video source to be coupled to the microprocessor 36**."

Referring to the above Figure 3, the microprocessor 36 receives the HSYNC signal from the signal converter 32 or the personal computer 21 via the multiplex unit 34. Accordingly, no HSYNC signal received by the microprocessor 36 means that there is no HSYNC signal from the signal converter 32 or the video drive module 26 of the personal computer 21. No HSYNC signal received from the signal converter 32 means that there is no signal from a device connected to the signal converter 32, for example, the video cassette recorder 20.

If there is no signal from the video cassette recorder 20, there is no signal processed by the signal converter 32. That is, when there is no signal from the video cassette recorder 20, i.e., when there is no signal into the signal converter 32, the HSYNC and VSYNC signal from another video signal source is coupled to the microprocessor 36. Accordingly, the HSYNC and VSYNC signal from another video signal source is coupled to the microprocessor only based on whether the HSYNC signal is received, but not based on the *decoding* of the HSYNC signal. Thus, Shaw does not discuss or suggest "checking whether the identified input signal is abnormal **by decoding** the identified input signal when the input signal cable is connected to the display device."

In Shaw, the output signals of the video drive module 26 are already in an analog RGB format suitable for driving the controller 12 (see col. 6, lines 11-14). That is, the video drive module 26 has five output signals – red, green, blue, horizontal synchronization (HSYNC) and vertical synchronization (VSYNC) (see col. 6, lines 15-19). Meanwhile, the video cassette recorder 20 outputs a NTSC television signal (see col. 3, lines 58-60). The signal converter 32 **only converts the NTSC television signal from the video cassette recorder 20 into an analog RGB signal suitable for driving the controller 12** (see col. 6, lines 6-9). In other words, the signal converter 32 **does not decode** an input signal to check whether the input signal is abnormal.

In summary, Shaw is limited to determining abnormality only if an HSYNC signal is **not** detected, but Shaw does not suggest that abnormality is determined if the input signal is received and decoded.

Further, this deficiency in Shaw is not cured by the other relied upon references, Sakuda, Welmer and Yamashita, taken alone or in combination.

Similar to the above argument regarding claim 1, it is respectfully submitted that Shaw, Sakuda, Welmer and Yamashita, taken alone or in combination, also does not suggest that "the checking comprises sensing whether an input signal cable is connected to the display device

and determining whether the identified input signal is abnormal by decoding the input signal when the input signal cable is connected to the display device," as recited in independent claim 6.

Similar to the above argument regarding claim 1, it is respectfully submitted that Shaw, Sakuda, Welmer and Yamashita, taken alone or in combination, also does not suggest that "the signal checking unit senses whether an input signal cable is connected to the display device and checks whether the identified input signal is abnormal by decoding the identified input signal when the input signal cable is connected to the display device," as recited in independent claim 11.

Similar to the above argument regarding claim 1, it is respectfully submitted that Shaw, Sakuda, Welmer and Yamashita, taken alone or in combination, also does not suggest that "the checking comprises sensing whether a signal input cable is connected and decoding the input signal when the signal input cable is connected," as recited in independent claim 25.

Similar to the above argument regarding claim 1, it is respectfully submitted that Shaw, Sakuda, Welmer and Yamashita, taken alone or in combination, also does not suggest that "the signal checking unit senses whether a cable via which each signal is input is connected and checks whether the input signal is normal by decoding the input signal when the cable via which each signal is input is connected," as recited in independent claim 40.

Similar to the above argument regarding claim 1, it is respectfully submitted that Shaw, Sakuda, Welmer and Yamashita, taken alone or in combination, also does not suggest that "whether the analog input port receives the normal analog input signal is determined by sensing whether a cable via which each signal is input is connected and decoding the input signal when the cable via which each signal is input is connected," as recited in independent claim 47.

Similar to the above argument regarding claim 1, it is respectfully submitted that Shaw, Sakuda, Welmer and Yamashita, taken alone or in combination, also does not suggest that "whether the digital input port receives the normal digital input signal is determined by sensing whether a cable via which each signal is input is connected and decoding the input signal when the cable via which each signal is input is connected," as recited in independent claim 48.

Similar to the above argument regarding claim 1, it is respectfully submitted that Shaw, Sakuda, Welmer and Yamashita, taken alone or in combination, also does not suggest that "whether the input signal is normal is checked by sensing whether a cable via which each signal

is input is connected and decoding the input signal when the cable via which each signal is input is connected," as recited in independent claim 49.

Claims 2, 4, 5, 7, 9, 10, 12-17, 20-24, 26-31, 34-44, 46, 50-53 and 55-58 depend either directly or indirectly from independent claims 1, 6, 11, 25, 40 and 47-49 and include all the features of their respective independent claims, plus additional features that are not discussed or suggested by the references relied upon, and are therefore believed to be allowable for at least the foregoing reason.

Withdrawal of the foregoing rejections is requested.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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By: _____

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